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Our Case No. 9281-4238
Client Reference No. S US00195

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Masaki Yamamoto et al.

Serial No. To Be Assigned

Filing Date: Herewith

For: Television Tuner Which Maintains UHF Band Tuning Circuit Bandwidth Constant in Low to High Band Range

PRELIMINARY AMENDMENT

Commissioner for Patents
P.O. Box 2327
Arlington, VA 22202

Dear Sir:

Prior to examination of the above-identified application, please amend the application as follows:

In the Drawings

Please replace Fig. 1 with the corrected Fig. 1 enclosed herewith. The corrections to the figure have been marked in red. Applicants respectfully request that the Examiner approve the corrections. Applicant will submit corrected formal drawings upon receiving a Notice of Allowance.

In the Specification

Please rewrite the paragraph on page 7, lines 1-12 as follows:

(Amended) A UHF input tuning circuit 11 of the UHF tuner 10 has a varactor diode 11a and first and second inductance elements 11b and 11c serially interconnected and substantially connected in parallel with the varactor diode. The cathode of the varactor diode 11a is grounded through a d.c. cut capacitor 11d in

accordance with high frequency grounding practices and one end of the first inductance element 11b is also grounded. The varactor diode 11a is connected in parallel with another inductance element 11e, which is intended to compensate for an undesired decrease in the inductance value of the first and second inductance elements 11b and 11c.

In the Claims

Please rewrite Claim 1 as follows:

1. (Amended) A television tuner comprising:

an input terminal through which one of UHF band and VHF band television signals are inputted;

a UHF tuner which receives the UHF band television signals; and

a VHF tuner which is provided together with the UHF tuner and receives at least the VHF band television signals,

the UHF tuner comprising:

a UHF tuning circuit having a varactor diode and first and second inductance elements serially interconnected and connected in parallel with the varactor diode, where the varactor diode varies a tuning frequency within a prescribed frequency range in the UHF band; and

an impedance circuit serially inserted between an input terminal and a junction of the first and second inductance elements, where an impedance of the impedance circuit increases with increasing frequency in the prescribed frequency range.

Please rewrite Claim 2 as follows:

2. (Amended) The television tuner according to Claim 1, wherein the impedance circuit comprises a series resonance circuit having a third inductance element and a capacitance element, where a resonance frequency of the series resonance circuit is below a minimum frequency in the prescribed frequency range.

Please rewrite Claim 3 as follows:

3. (Amended) The television tuner according to Claim 2, wherein a diode is serially inserted in the impedance circuit and the diode is turned on when UHF band television signals are received and is turned off when VHF band television signals are received.

Please rewrite Claim 4 as follows:

4. (Amended) The television tuner according to Claim 3, wherein one end of the first inductance element is grounded and a resonance frequency of the series circuit including the diode in the off state, the series resonance circuit and the first inductance element is within the UHF band.

Please rewrite Claim 5 as follows:

5. (Amended) The television tuner according to Claim 3, wherein a band switching circuit is provided to generate UHF selection voltage and VHF selection voltage which one of activate and inactivate the UHF tuner and VHF tuner, respectively, and the UHF selection voltage is applied to an anode of the diode and the VHF selection voltage is applied to a cathode of the diode.

REMARKS

Applicants have rewritten portions of the specification and Claims1-5. The changes from the previous version to the rewritten version are shown in attached Appendix A, with strikethrough for deleted matter and underlines for added matter.

Respectfully submitted,

Gustavo Siller, Jr.
Registration No. 32,305
Attorney for Applicants

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, ILLINOIS 60610
(312) 321-4200

APPENDIX A
Attorney Docket No. 9281-4238
Television Tuner Which Maintains UHF Band Tuning Circuit Bandwidth Constant in Low to High Band Range
Masaki Yamamoto et al.

In the Specification

Please amend the paragraph on page 7, lines 1-12 as follows:

(Amended) A UHF input tuning circuit 11 of the UHF tuner 10 has a varactor diode 11a and first and second inductance elements 11b and 11c serially interconnected and substantially connected in parallel with the varactor diode. The cathode of the varactor diode 11a is grounded through a d.c. cut capacitor ~~51d~~11d in accordance with high frequency grounding practices and one end of the first inductance element 11b is also grounded. The varactor diode 11a is connected in parallel with another inductance element 11e, which is intended to compensate for an undesired decrease in the inductance value of the first and second inductance elements 11b and 11c.

In the Claims

Please amend Claim 1 as follows:

1. (Amended) A television tuner comprising:

an input terminal through which one of UHF band ~~or~~and VHF band television signals are inputted;

a UHF tuner which receives the UHF band television signals; and

a VHF tuner which is provided together with the UHF tuner and receives at least the VHF band television signals,

the UHF tuner comprising:

a UHF tuning circuit having a varactor diode and first and second inductance elements serially interconnected and connected in parallel with the varactor diode, where the varactor diode varies a tuning frequency within a prescribed frequency range in the UHF band; and

an impedance ~~means~~circuit serially inserted between ~~the~~an input terminal and ~~the~~a junction of the ~~two~~first and second inductance elements, where ~~the~~an impedance ~~by~~of the impedance ~~means~~circuit increases ~~as a~~with increasing frequency ~~increases~~ in the prescribed frequency range.

Please amend Claim 2 as follows:

2. (Amended) The television tuner according to Claim 1, wherein the impedance ~~means consists of~~circuit comprises a series resonance circuit ~~composed of~~having a third inductance element and a capacitance element, where a resonance frequency of the series resonance circuit is ~~set to~~ below ~~the~~a minimum frequency in the prescribed frequency range.

Please amend Claim 3 as follows:

3. (Amended) The television tuner according to Claim 2, wherein a diode is serially inserted in the impedance ~~means~~circuit and the diode is turned on when UHF band television signals are received~~, while it~~ and is turned off when VHF band television signals are received.

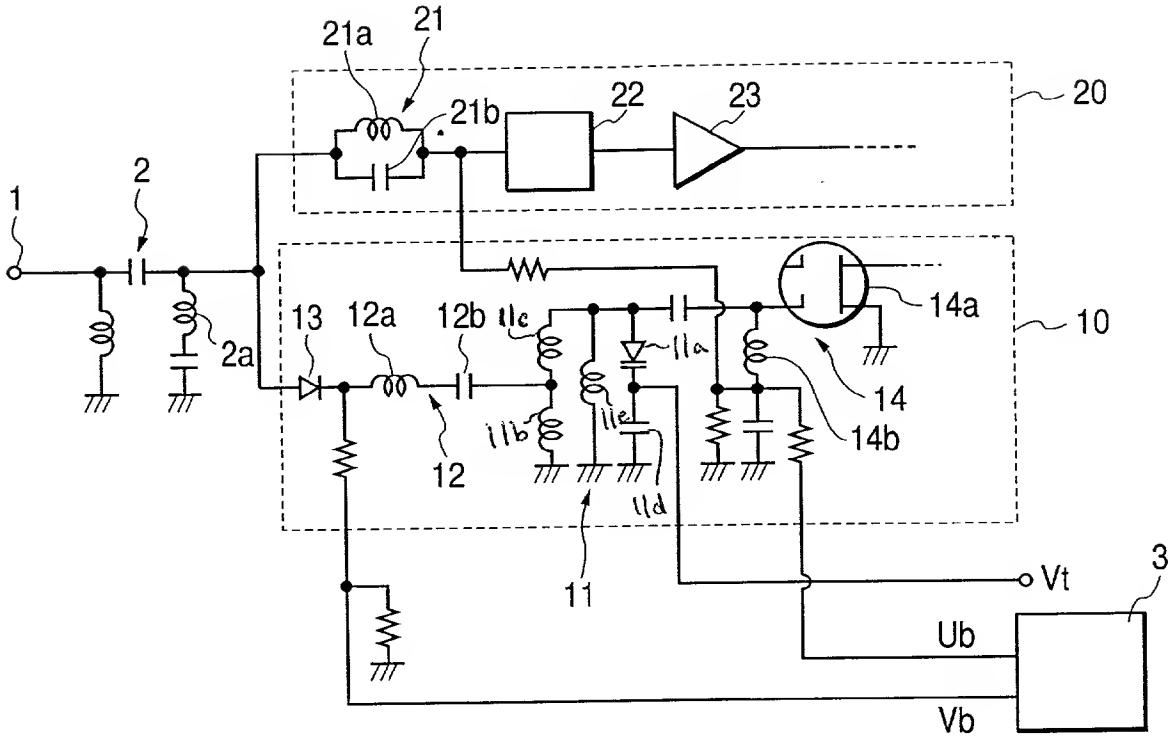
Please amend Claim 4 as follows:

4. (Amended) The television tuner according to Claim 3, wherein one end of the first inductance element is grounded and a resonance frequency of the series circuit ~~composed of~~including the diode in the off state, the series resonance circuit and the first inductance element is ~~set to~~ within the UHF band.

Please amend Claim 5 as follows:

5. (Amended) The television tuner according to Claim 3, wherein a band switching circuit is provided to generate UHF selection voltage and VHF selection voltage which one of activate ~~or~~and inactivate the UHF tuner and VHF tuner, respectively, and the UHF selection voltage is applied to ~~the~~an anode of the diode and the VHF selection voltage is applied to ~~its~~a cathode of the diode.

FIG. 1


21a
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14b
12
11b
11e
11d
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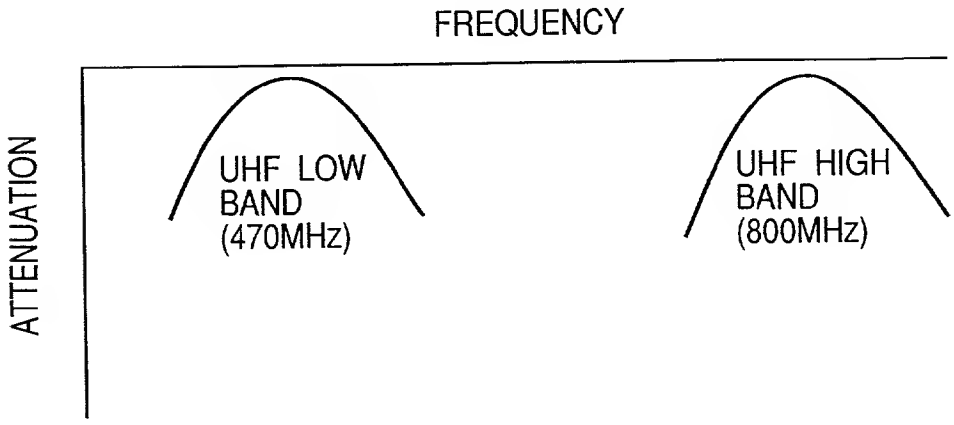
Vt
3
Ub
Vb

FIG. 2


FREQUENCY
ATTENUATION
UHF LOW BAND (470MHz)
UHF HIGH BAND (800MHz)